

WFO 98/49264

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## CLAIMS

$$500 B_1 >$$

1. Continuous method for the maturation of beer after main fermentation, in which method the un-matured beer, after removal of yeast and a heat treatment, is passed into a bio-reactor filled with a carrier material with yeast immobilised on it. characterised in that the carrier material mainly consists of wooden particles and/or similar particles.
2. Method as defined in claim 1, characterised in that said particles are chip-like or stick-like particles or particles shaped like any regular or irregular bodies, whose dimension is of the order of 1 - 100 mm, advantageously 1 - 50 mm, preferably 2 - 20 mm. 4 inches
3. Method as defined in ~~any one of claims 1 - 2~~, characterised in that the wooden particles have been produced from deciduous wood. CLAIM 1
4. Method as defined in ~~any one of claims 1 - 2~~, characterised in that the wooden particles have been produced from coniferous wood. CLAIM 1
5. Method as defined in ~~any one of claims 1 - 2~~, characterised in that the wooden particles have been produced from tropical gramineous plants. CLAIM 1
6. Method as defined in ~~any one of claims 1 - 2~~, characterised in that the yeast used in the reactor is conventional brewing yeast and/or highly flocculable yeast. CLAIM 1
7. Method as defined in any one of claims 1 - 2, characterised in that the amount of yeast in the reactor is  $10^6$  -  $10^9$  cells/l cm<sup>3</sup> of particles. CLAIM 1
8. Method as defined in ~~any one of claims 1 - 2~~, characterised in that the temperature in the reactor is 5 - 25 °C, preferably 5 - 20 °C. CLAIM 1
9. Method as defined in ~~any one of claims 1 - 2~~, characterised in that the flow rate of

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unmatured beer through the reactor is of the order of 0.05 - 2 times the reactor volume / h, preferably 0.5 - 1 reactor volume / h.

CLAIM 1

10. Method as defined in any one of claims 1-9, characterised in that the particles are regenerated, preferably using hot water or steam.

CLAIM 2

11. Method as defined in any one of claims 1-10, characterised in that the particles are subjected to a treatment, preferably a water cooking treatment or ethanol extraction treatment, prior to immobilisation.

12. Method as defined in claim 11, characterised in that the particles are washed.

13. Continuous beer maturation reactor, which is an upright column-type flow-through reactor containing one or more sieves, intermediate bottoms or flanges and which is filled with a carrier material with yeast immobilised on it, characterised in that the carrier material mainly consists of wooden particles and/or similar particles.

14. Maturation reactor as defined in claim 13, characterised in that said particles are chip-like or stick-like particles or particles shaped like any regular or irregular bodies, whose dimension is mainly of the order of 1 - 100 mm, preferably 1 - 50 mm.

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END  
B<sub>1</sub>ADD  
B<sub>2</sub> >